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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,520	06/29/2001	Noga Peled	PELED5	2995
1444	7590	04/22/2005	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303			TANG, KENNETH	
			ART UNIT	PAPER NUMBER
			2195	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/893,520	<b>Applicant(s)</b> PELED ET AL.	
	<b>Examiner</b> Kenneth Tang	<b>Art Unit</b> 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This final action is in response to the Amendment filed on 1/4/05. Applicant's arguments have been fully considered but were not found to be persuasive.
2. Claims 1-16 are presented for examination.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7, 9-10, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

- a. In claim 1, "said plurality" (line 5) is indefinite because it is not made explicitly clear whether this refers to the plurality of commands or plurality of resources. It also lacks antecedent basis. If it is the commands, it is recommended to amend the claims to reflect a plurality of commands.
- b. In claim 5, "combined priority" (line 3) is indefinite because there lacks a relationship established between this term with the critical and non-critical subcommands (of claim 4).
- c. In claims 7 and 12, "partial report" is indefinite because it is not made explicitly clear in the claim language whether this reflects an incomplete or a biased report. If incomplete, a suggestion may be to amend it as a preliminary or incomplete report?

- d. In claim 9, "higher level processor" is indefinite because it is not made explicitly clear whether or not the higher level processor is related to a higher priority. It is unclear what levels are referring to.
- e. In claim 9, "higher level processor capable of cooperating with said command processors considered lower level processors" is indefinite because it is grammatically incorrect, does not make sense, and is written unclearly. In addition, there is lack of antecedent basis for "said command processors considered lower level processors."

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4. Claims 1, 6, 8, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stumer (US 2002/0064271 A1) in view of Coffman et al. (hereinafter Coffman) (US 6,553,438 B1).**

5. As to claim 1, Stumer teaches a method for utilizing shared resources (database) in a computerized system (optimization system includes a database and a database server), with the aid of a processor for processing a plurality of commands to be executed using **two** or more of said shared resources, the method comprising steps of:

deriving, from each of said commands, subcommands (subroutine) respectively related to said shared resources (database) (*page 1, [0016], page 4, [0037]*),  
assigning priorities to said subcommands (subroutine) (*page 5, [0049]*),  
forwarding said subcommands to the respective two or more shared resources, so that each of said queues comprises the subcommands related to a particular shared resource (*page 4, [0037]*),  
thereby ensuring execution of the subcommands by said shared resources in an asynchronous manner, and according to said subcommand priorities by each of the shared resources (*page 2, [0027], page 5, [0049]*).

6. Stumer teaches processing using commands and subroutine. However, Stumer fails to explicitly teach wherein at least one command of said plurality comprises two or more sub-commands to be executed at different said two or more shared resources. However, Coffman teaches using a plurality of functions or commands with a plurality of subroutines for resource shared in a pool executing asynchronously or synchronously (col. 6, lines 22-39 and col. 9, lines 39-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of at least one command of said plurality comprises two or more sub-commands to be executed at different said two or more shared resources to the existing shared resource utilization system of Stumer because this would increase control by the commands and sub-commands (subroutines) being able to invoke each other and pass data and/or parameters between each other as needed.

7. Stumer teaches storing data such as priority and instructions (functions and subroutines) in a database (shared resource) and a memory register, but fails to explicitly

teach that the database contain queues as the data structure. However, "Official Notice" is taken that both the concept and advantages of providing that storing with queues as a data structure is well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the database containing queues to the existing system in order to have a data structure that is able to contain (store) data.

8. As to claim 6, it is rejected for similar reasons as stated in the rejection of claim 1. In addition, Stumer teaches creating reports (monitoring and statistics unit) relating to said commands (*Abstract*). Stumer and Coffman fails to explicitly teach having responses for successful completion. However, "Official Notice" is taken that both the concept and advantages of providing that responses for successful completion is well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include responses for successful completion to the existing system of Stumer and Coffman because having a response for successful completion will provide the benefit of knowing when completion has occurred.

9. As to claim 8, it is rejected for the same reasons as stated in the rejection of claims 1 and 6.

10. As to claim 13, it is rejected for the same reasons as stated in the rejection of claim 8. In addition, Stumer teaches using memory buffers (*page 3, [0031] and [0034]*).

11. As to claim 14, it is rejected for the same reasons as stated in the rejection of claim 8. In addition, the priority is sorted as performing the higher priority first.

12. As to claim 15, it is rejected for the same reasons as stated in the rejection of claim 8. In addition, Stumer teaches controlling a telecommunication network (public telecommunication network/exchange) (*page 2, [0027]*).

13. As to claim 16, it is rejected for the same reasons as stated in the rejection of claim 8.

**14. Claims 2-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stumer (US 2002/0064271 A1) in view of Coffman et al. (hereinafter Coffman) (US 6,553,438 B1), and further in view of Cota-Robles (US 2001/0056456 A1).**

15. As to claim 2, Stumer fails to explicitly teach assigning different command priorities to said commands, wherein the command priorities set an order of their urgency. However, Cota-Robles teaches priorities are typically assigned to programs according to the importance and/or urgency of the functions they perform on behalf of the computing system (*page 1, [0004]*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of assigning different command priorities to said commands, wherein the command priorities set an order of

Art Unit: 2195

their urgency to the existing system because these priorities of urgency are used to determine when and for how long a program or a unit of executable code within the program is granted access to the processor and also optimizes the computer system's performance by, for example, minimizing response time to user input, maximizing throughput, and/or guaranteeing predictable execution times for application programs (*page 1, [0004]*).

16. As to claim 3, it is rejected for the same reasons as stated in the rejections of claims 1 and 2.

17. As to claim 4, it is rejected for the same reasons as stated in the rejections of claims 1 and 2.

18. As to claim 5, Stumer teaches wherein the step of assigning priorities to the subcommands comprises assigning to each subcommand a combined priority, the combined priority being determined based on the subcommand's priority in the command and the priority of said command (*page 5, [0049]*).

19. As to claim 11, it is rejected for the same reasons as stated in the rejections of claim 4.

20. As to claim 12, it is rejected for the same reasons as stated in the rejections of claims 8 and 11.



21. **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stumer (US 2002/0064271 A1) in view of Coffman et al. (hereinafter Coffman) (US 6,553,438 B1), and further in view of Reeve et al. (hereinafter Reeve) (US 5,535,393).**

22. As to claim 7, it is rejected for similar reasons as stated in the rejections of claims 1 and 6. However, Sumer and Coffman fail to explicitly teach issuing a partial report with respect to a particular command before completing its execution. However, Reeve teaches processing with tasks and subtasks, issuing a preliminary analysis (partial report) with respect to the source code before completing its execution is well known (*col. 7, lines 28-37*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of issuing a preliminary analysis (partial report) with respect to the source code before completing its execution to the existing executing system of Stumer and Coffman because this determines the dependency directions for execution (*col. 7, lines 28-37*).

23. **Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stumer (US 2002/0064271 A1) in view of Coffman et al. (hereinafter Coffman) (US 6,553,438 B1), and further in view of Aucsmith et al. (hereinafter Aucsmith) (US 6,243,793 B1).**

24. As to claim 9, Stumer fails to explicitly teach a higher level processor capable of cooperating with said command processors considered lower level processors, said higher level processor being operative to distribute the commands between said command processors, and receive from said command processors reports to respective commands. However, Aucsmith teaches using a master processor that manages and coordinates the tasks/activities of various slave processors based on the order of priority (*col. 1, lines 25-36*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a higher level processor capable of cooperating with said command processors, said higher level processor being operative to distribute the commands between said command processors, and receive from said command processors reports to respective commands to the existing system of Stumer because it would be beneficial to have a master processor as a manager to keep coordinate with, track and control the various processors beneath it (*col. 1, lines 25-36*).

25. As to claim 10, it is rejected for the same reasons as stated in the rejection of claim 9. In addition, the priority is sorted as performing the higher priority first.

#### ***Response to Arguments***

26. *Applicant argues on page 10 that the references do not teach all its sub-commands are to be executed but rather only some of its subroutines are to be executed.*

In response, claim 1 as amended does not explicitly teach that all its subcommands are executed. It merely states that two or more sub-commands are

Art Unit: 2195

executed. This is not necessarily all but rather at least some. At best, (all) subcommands may be related to the shared resources, however, relating does not necessarily constitute as executing.

27. *Applicant stated on page 10 that an amendment was made to recite a method which includes executing a plurality of commands wherein at least one command of the plurality comprises two or more component sub-commands to be executed at different ones of the two or more shared resources for executing the command.*

In response, no such amendment was made by the Applicant.

28. *Applicant argues on page 10 that Stumer discloses only one.*

In response, the Examiner respectfully disagrees. Stumer teaches a plurality of functions (routines) ([0020], [0022]).

29. *Applicant argues that Stumer does not teach sub-commands are executed (and not stored) by the shared resources.*

First, it is not stated in the claim language that the something can't be stored by the shared resources. The database was mentioned by the Examiner to illustrate what the shared resource was. Each subroutine (sub-command) is part of a function and are executed by the shared resources. The broadest reasonable interpretation reads on the claims.

30. *Applicant argues on page 13 that Aucsmith's slave processors must receive from the master processor a permission for access to shared resources and that it is not the way of operations as claimed in Applicant's claims 9 and 10.*

In response, the broadest reasonable interpretation of claims 9 and 10 does not state that the slave processor must NOT receive from the master processor a permission for access to shared resources, therefore, Aucsmith does not teach away from Stumer.

### ***Conclusion***

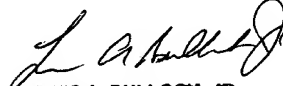
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LEWIS A. BULLOCK, JR.  
PRIMARY EXAMINER

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4/4/05